

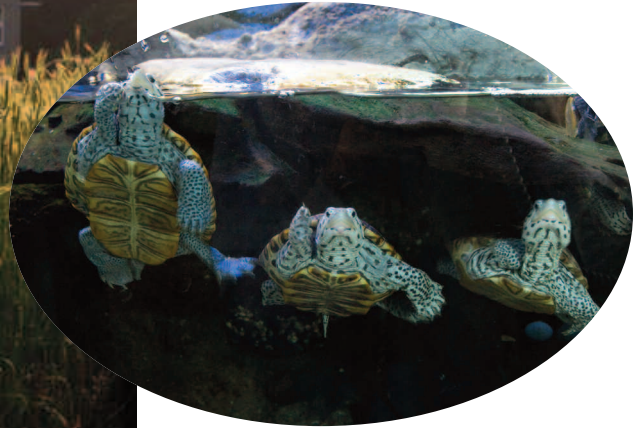


# Irvine

INSTITUTE FOR  
ENVIRONMENTAL  
EDUCATION

cataLog of COURSES  
WINTER AND SPRING 2010





# OVERVIEW

Irvine Nature Center is pleased to announce a new series of continuing education courses in natural science, ecology and environmental education. These adult courses provide an excellent opportunity to learn about a wide variety of subjects in greater depth.

Recommended for beginning and intermediate learners, these courses include both classroom and outdoor instruction. Most classes meet weekly and are approximately 15 hours in length per semester. Taught by Irvine staff and other experts in the field, they are designed to promote environmental literacy and a greater understanding of and appreciation for the natural world.

Some courses may have recommended books and/or reading assignments. Unless otherwise indicated, courses take place at Irvine. Field trips are often at off-site locations. Irvine Nature Center will award a Certificate of Achievement to participants who complete more than 100 hours of class time (approximately 7 courses).

The new Irvine Institute joins some of Irvine's other popular adult offerings such as its annual Speaker Series (scheduled for summer 2010), Habitat Stewards™ class, and *Native Plant Seminar and Sale*. The courses are ideal for amateur nature enthusiasts as well as professionals in the field. They will balance natural history and ecology information with exploring environmental issues and gaining practical experience on how to be better stewards of the earth.

## Winter Season

- Winter Tree Ecology and Identification
- Principles of Ecology
- The Owls and Woodpeckers of Maryland
- Introduction to Environmental Education

## Spring Season

- The Fascinating World of Maryland's Native Plants
- Wetland Ecology
- Beekeeping Short Course
- Introduction to Avian Biology and Ecology



# WINTER

## Winter Tree Ecology and Identification

(6 sessions)

Wednesdays, January 20 – February 10,  
7:00 - 9:00 p.m. and  
Saturdays, January 30 and February 13,  
9:00 a.m. – 12:30 p.m.

If you are confused by conifers and deceived by deciduous trees, then this course is for you. Trees are among Earth's largest and oldest living species. Even without their leaves, they dominate the winter landscape of Maryland's backyards and forests. Participants will learn different strategies for identifying our native evergreen and broad-leaved trees by focusing on features such as twigs, buds, bark, fruit, overall shape, branching pattern and habitat. We will also review tree families, tree ecology, how to care for backyard trees in winter, plus different techniques for estimating their ages and sizes. Finally, we will take a close look at Maryland's maple trees and the maple sugaring process.

Instructor: Robert Mardiney  
Fee: \$130 members,  
\$145 non-members

## Principles of Ecology

(7 sessions)

Thursdays, January 14 – February 18,  
6:30 - 8:30 p.m. and  
Saturday, January 30,  
9:00 a.m. – 1:00 p.m.

Plants and animals are connected to one another and to the earth and atmosphere that surrounds them through an endless chain of relationships. Participants in this course will study these relationships and the basic principles of

contemporary ecology including global warming, biogeochemical cycles, population characteristics, succession, habitat, niche and more. They will then apply this knowledge to environmental issues principally in Maryland. Gain a greater understanding of how natural systems operate and the consequences of their disruptions. A field trip to Hemlock Gorge in Gunpowder Falls State Park will include a look at stream ecology, aquatic invertebrates and water quality assessment.

Instructor: Dr. Charles Stine  
Fee: \$130 members,  
\$145 non-members

## The Owls and Woodpeckers of Maryland

(5 sessions)

Tuesdays, January 26 – February 16,  
6:30 - 9:00 p.m. and  
Saturday, February 20,  
9:00 a.m. – 1:00 p.m.

While only avid birders are familiar with brown creepers and warbling vireos, you don't need to be an ornithologist to be familiar with woodpeckers and owls. Through their familiar calls, interesting adaptations and personification in folklore and popular culture, most people have a basic knowledge of these common local birds. This course propels the participants beyond the generic concept of owls and woodpeckers and into the reality of woodpecker and owl life histories and ecology. Two field sessions will accompany the classroom portion of this class.

Instructor: Peter Martin  
Fee: \$130 members,  
\$145 non-members

## Introduction to Environmental Education

(7 sessions)

Mondays, January 25 – March 15,  
4:30 – 6:30 p.m.  
(no class on February 15)

Environmental educators help people understand the natural world, but they also try to instill the motivation and skills needed to solve current problems and prevent new ones. This course is an introduction to the field and practice of Environmental Education (EE). It surveys the history, philosophies, theories, concepts, and methods of EE as they pertain to both formal settings (schools) and informal education settings (nature centers, zoos, aquaria, science centers, museums, etc.). Program planning, implementation, and assessment will be examined in the context of informal EE providers.

Instructor: Dr. Sarah Haines  
Fee: \$130 members,  
\$145 non-members



# SPRING

## The Fascinating World of Maryland's Native Plants

(6 sessions)

Wednesdays, April 21 – May 12,  
7:00 – 9:00 p.m. and  
Sundays, April 25 and May 16,  
1:00 – 4:30 p.m.

Maryland's trees, wildflowers and ferns have evolved a wide variety of adaptations to survive in an often dangerous and competitive world. This course will provide a basic introduction to plant ecology and natural history. Enter an amazing world where plants can communicate when under attack, reward and deceive animals to enlist their assistance and employ an arsenal of chemical weaponry. We will discuss biodiversity, plant folklore, native and exotic plants, and basic plant identification. Plants are more than just habitats for animals. Learn different ways people have used plants over the years and what you can do to help our local plant communities and ecosystems.

Instructor: Robert Mardiney  
Fee: \$130 members,  
\$145 non-members



## Introduction to Avian Biology and Ecology

(6 sessions)

Tuesdays and Thursdays,  
April 13 - 22; 6:30 - 8:30 p.m.  
Saturday, April 17;  
8:00 a.m. - 12:00 p.m. (at Eden Mill)  
Saturday, April 24;  
8:00 a.m. - 3:00 p.m.  
(carpool to Delaware shore)

Birds are an important class of wildlife that coexists with humans in nearly every part of the modern world. Birds provide a substantial ecological and economic service, and their active and highly visible nature lends them well to recreational interest for the naturally inclined. Additionally, the study of birds is one of the few scientific pursuits where non-professionals regularly make significant contributions – a meaningful opportunity considering how many bird populations are experiencing declines.

Here we present an integrative course specifically designed to provide a comprehensive introduction to birdlife and associated field study techniques. Designed for the beginner and intermediate avian enthusiast, lectures and field exercises include material on species identification, field techniques, anatomical structure and function, taxonomy, distribution, ecology and conservation.

Instructor: Dr. Mark Johnson  
Fee: \$130, members,  
\$145 non-members



## Beekeepers Short Course

(5 sessions)

Wednesdays, March 17 – April 7,  
6:30 - 8:30 p.m.  
Saturday, April 10,  
9:00 a.m. – 2:00 p.m.

Honey bees are fascinating to watch and learn about, and beekeeping is a great family activity. Honeybees make gardens and fruit trees more productive, and the honey they produce is delicious. This course is for beginning and intermediate beekeepers and anyone interested in honey bees. The course will cover everything you need in order to have thriving bees from the start, including: equipment, honey bee biology, dealing with stings, year-round management, swarm control, bee diseases, honey extracting, inspecting a hive, and lots more. This course includes hands-on work in the apiary.

Instructor: Steve McDaniel  
Fee: \$45 members, \$50 non-members  
(Great Price!)

## Exploring Maryland's Wetlands

(7 sessions)

Thursdays, April 15-May 13,  
6:30 -8:30 p.m.  
Saturday, April 24;  
10:00 a.m. - 2:00 p.m. and  
Saturday, May 15;  
10:00 a.m. - 5:00 p.m.

Tidal and non-tidal wetlands have important ecological, economic and social value. This course surveys wetland definitions, classification systems, disturbance sources, regulations and mitigations. Fieldwork emphasizes an overview of soils, plants and hydrology that characterize diverse wetlands in Maryland. The course includes two off-site field trips: the first to a local wetland and the second to Delaware Bay (participants will carpool).

Instructor: Dr. Charles Stine  
Fee: \$130 members,  
\$145 non-members

# about the INSTRUCTORS

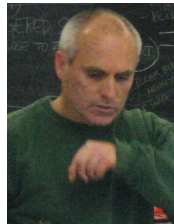
**Dr. Sarah Haines** is an Associate Professor in the Department of Biological Sciences at Towson University where she teaches science education courses for elementary and secondary education majors and an environmental education course for biology majors. Research interests focus on using the environment as an integrating context for learning. She was a past-president of MAEOE, is a certified Project Wet, Wild, Learning Tree facilitator and volunteers for the DNR's TEAM program.



**Dr. Mark Johnson** is a senior Wildlife Toxicologist with the U.S. Army Center for Health Promotion and Preventive Medicine in Aberdeen. He has over 15 years of experience in the field of avian ecology, physiology and banding techniques, having assisted Dr. Chandler Robbins in Guatemala, Belize, Patuxent and elsewhere. He holds an M.S. from the University of Delaware where he studied factors that influenced breeding success of Wood Thrush and a Ph.D. from Virginia Tech. Mark is also the Vice President of the Maryland Ornithological Society.



**Robert Mardiney** is the Director of Education at Irvine Nature Center where he has worked for more than 20 years. He has a Master's degree in Environmental Education from Cornell University and a Bachelor's in Biology from Vassar College. He was a past-president of the Maryland Association for Environmental and Outdoor Education (MAEOE) and is currently on the Board of the Maryland Native Plant Society.



**Peter Martin** is the School Programs Manager at the Maryland Zoo in Baltimore. He has a BS degree from the University of Vermont in Wildlife Biology. He was also a Naturalist at Irvine Nature Center for 14 years and is a long-time bird and nature watcher.

**Steve McDaniel** is a certified master beekeeper, award-winning nature photographer, writer and President of the Maryland State Beekeepers Association. He is the winner of the Grand Champion award at the Maryland State Fair 2007 & 2008 and has been keeping bees for more than 30 years.



**Dr. Charles Stine, Sc.D.**, taught ecology at the graduate, undergraduate and non-credit levels at Johns Hopkins University, Goucher and Notre Dame Colleges for over 35 years. He is an environmental consultant, the primary founder of BioTrek Naturalists, Inc., and an Audubon Society nature photographer. His specialty is the ecology and behavior of amphibians.





## IRVINE NATURE CENTER

Irvine Nature Center is a non-profit environmental education organization whose mission is to inspire appreciation and respect for the natural world, to increase awareness of environmental issues, and to encourage individuals to sustain Earth's ecosystems.

### MEMBERSHIP

As a non-profit organization, Irvine depends on the support of its members. Membership contributions help cover the cost of providing programs, maintaining our trails and gardens and feeding our animals.

The basic member levels are:  
\$50 (Individual) and \$75 (Family).

Members receive:

- 10% discount in our Nature Store
- Priority registration and 10% off children's summer nature camps and preschool programs
- Discounts on facility rentals
- Up to 20% discount on children's birthday parties
- Discounts and priority registration on various special events



### To Register

If you would like to register, please complete and return the enclosed registration form with payment.

### Cancellation Policy

- Irvine reserves the right to cancel a program due to insufficient enrollment.
- If Irvine cancels a program, you will receive a full refund.
- If you cancel your reservation less than one week before the program begins, all but a \$20 administrative fee is refunded.

### More Information

If you have questions or need additional information, please contact Courtney Sagal at (443) 738-9224 or email her at [SagalC@ExploreNature.org](mailto:SagalC@ExploreNature.org)

### Look for these courses in the Summer and Fall Seasons

- Chesapeake Bay Ecology
- Insect Ecology
- Habitat StewardsTM
- Environmental Politics
- Naturalist Training
- Butterflies and Other Pollinators
- Fern Identification and Ecology
- Environmental Geology
- Spring Wildflowers
- Maryland Reptiles and Amphibians

# WINTER/SPRING 2010 registration form

Name \_\_\_\_\_

Address \_\_\_\_\_

Phone \_\_\_\_\_ Email \_\_\_\_\_

Are you an Irvine member? ☐ Yes ☐ No

Would you like to join/renew? ☐ Yes ☐ No

## Winter Season

- ☐ Winter Tree Ecology and Identification
- ☐ Principles of Ecology
- ☐ The Owls and Woodpeckers of Maryland
- ☐ Introduction To Environmental Education

## Spring Season

- ☐ The Fascinating World of Maryland's Native Plants
- ☐ Wetland Ecology
- ☐ Beekeeping Short Course
- ☐ Introduction to Avian Biology and Ecology

Course Fee(s) \$ \_\_\_\_\_

Member Dues \$ \_\_\_\_\_  
(new members)

Total \$ \_\_\_\_\_

Check one of the following:

☐ Payment Enclosed (check(s) payable to Irvine Nature Center)

☐ VISA / MasterCard:(credit card number) \_\_\_\_\_

Signature: \_\_\_\_\_

Exp. Date: \_\_\_\_\_ Security code: \_\_\_\_\_

Print Name on Card: \_\_\_\_\_

I give Irvine permission to use any photos taken for use in promotional materials to support Irvine Nature Center and Irvine Institute. ☐ Yes ☐ No

Please send this form to:

Irvine Nature Center / 11201 Garrison Forest Road / Owings Mills, MD 21117 / Attn: Courtney Sagal





# Irvine

Nature Center

11201 Garrison Forest Road  
Owings Mills, MD 21117  
(443) 738-9200  
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IRVINE INSTITUTE for environmental education